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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,660	04/12/2001	Luan C. Tran	MI22-1637	6625

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EXAMINER	
SCHILLINGER, LAURA M	

ART UNIT	PAPER NUMBER
2813	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/834,660	TRAN	
	Examiner	Art Unit	
	Laura M Schillinger	2813	

-- Th MAILING DATE of this communication app ars on th cover sh t with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-30 and 61-80* is/are pending in the application.

4a) Of the above claim(s) *63-68 and 73-78* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-30,61,62,69-72,79 and 80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *all*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Newly submitted claims 63-68, 73-78 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Newly added claims 63-68 and 73-78 pertain to a separate and distinct species from that of the originally elected claims because the originally presented claims contain claim language requiring one or more common channel implants which define the threshold voltage, this is distinct from Applicant's newly added claims which designate that the common channel implant be carried out at the same moment in time.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 63-68 and 73-78 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 61-62, 71-72 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. The Examiner could not find support within the Applicant's specification for newly added subject matter of having transistors of specific geometry types.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-30, 69-70, 79-80 are rejected under 35 U.S.C. 102(e) as being anticipated by Liaw et al ('276).

In reference to claim 21, Liaw et al teaches a method comprising:

Forming two series of FETs over a substrate (Fig.1 (NMOS and PMOS (13 and 15 see also Col.s 2-3, lines: 65-5), one being isolated from adjacent devices by STI (Fig.3A (STI)), the other having active area widths greater than 1um (Fig.3A 12W) and , the one series being formed to have active area widths less than 1 um to achieve lower threshold voltages (TVs) than the other of the series (Fig.3A (12N) see also Col.4, lines: 55-65).

In reference to claim 22, Liaw et al teaches wherein the TVs for the 2 series of FETS are defined by a common channel implant (NMOS and PMOS are defined respectively by doping the NMOS and note the PMOS with boron-Col.3, lines: 30-45).

In reference to claim 23, Liaw et al teaches wherein the threshold voltages for the two series of FETs are defined by a common channel implant, the implant being the only channel implant which defines the TVs for the two series of FETs (Col.4, lines: 5-6).

In reference to claim 24, Liaw et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants (NMOS and PMOS are defined respectively by doping the NMOS and note the PMOS with boron-Col.3, lines: 30-45).

In reference to claim 25, Liaw et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants, the common channel implants being the only channel implants which define the TV for the two series of FETs (NMOS and PMOS are defined respectively by doping the NMOS and note the PMOS with boron-Col.3, lines: 30-45).

In reference to claim 26, Liaw et al teaches a method of forming two series of FETs over a substrate (Fig.1 NMOS and PMOS (13 and 15)), one being isolated from adjacent devices by STI (Fig.3 (STI)), and achieving different TVs by varying the active widths at least one series having active area widths less than 1um (See Table).

In reference to claim 27, Liaw et al teaches wherein the TVs for the 2 series of FETS are defined by a common channel implant (Col.4, liens: 5-6).

In reference to claim 28, Liaw et al teaches wherein the threshold voltages for the two series of FETs are defined by a common channel implant, the implant being the only channel implant which defines the TVs for the two series of FETs (NMOS and PMOS are defined respectively by doping the NMOS and note the PMOS with boron-Col.3, lines: 30-45).

In reference to claim 29, Liaw et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants (NMOS and PMOS are defined respectively by doping the NMOS and note the PMOS with boron-Col.3, lines: 30-45).

In reference to claim 30, Liaw et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants, the common channel implants being the only channel implants which define the TV for the two series of FETs (NMOS and PMOS are defined respectively by doping the NMOS and note the PMOS with boron-Col.3, lines: 30-45).

In reference to claim 69, Liaw et al teaches wherein the common channel implant comprises implanting a single type of impurity (boron-Col.3, lines: 30-45).

In reference to claim 70, Liaw et al teaches wherein the common channel implant comprises implanting a single type of impurity to define the different Tvs of the transistors of the two series (Col.4, lines 4-6).

In reference to claim 79, Liaw et al teaches wherein the common channel implant comprises implanting a single type of impurity (boron-Col.3, lines: 30-45).

In reference to claim 80, Liaw et al teaches wherein the common channel implant comprises implanting a single type of impurity to define the different Tvs of the transistors of the two series (Col.4, lines 4-6).

Response to Arguments

Applicant's arguments with respect to claims 21-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMS

5/28/04